

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-37 (Canceled)

38- (New) A process for reinforcing silicone elastomers with a reinforcing precipitated silica filler, comprising the steps of:

- a) pretreating said precipitated silica by at least one organosilane hydrophobing compound or one hydrophobing silicone oil, and
- b) incorporating the pretreated silica in the silicone elastomer by cold mixing, said pretreated silica having the following characteristics :

a BET specific surface ranging from 50 to 450 m²/g,

a water wettability lower than 80, and

a sulfur content lower than 0.1 % by weight.

39- (New) The process according to claim 38, wherein the said pretreated silica obtained in step a) has a BET specific surface ranging from 60 to 250 m²/g, optionally from 65 to 150 m²/g.

40- (New) The process according to claim 39, wherein the said pretreated silica obtained in step a) presents a water wettability ranging from 10 to 75, optionally from 35 to 75.

41- (New) The process according to claim 40, wherein the said pretreated silica obtained in step a) has a sulfur content lower than 0.05 % by weight.

42- (New) The process according to claim 41, wherein the said pretreated silica obtained in step a) has a carbon content of at least 1.8 %, optionally ranging from 2 to 5 %, by weight.

43- (New) The process according to claim 42, wherein the said pretreated silica obtained in step a) presents a parameter C lower than 80, optionally lower than 30.

44- (New) The process according to claim 43, wherein the said pretreated silica presents a median particle size lower than 30 μm , optionally lower than 25 μm .

45- (New) The process according claim 44, wherein the difference in water uptake, measured at 20 °C, with a controlled relative humidity of 71 %, between the non-pretreated silica and the pretreated silica obtained in step a) is of at least 1.5 %.

46- (New) The process according to claim 44, wherein the difference in water uptake, measured at 20 °C, with a controlled relative humidity of 51 %, between the non-pretreated silica and the pretreated silica obtained in step a) is of at least 1.0 %.

47- (New) The process according to claim 39, wherein the non-pretreated silica used in step a) presents a BET specific surface, S_{BET} , and a CTAB specific surface, S_{CTAB} , such that their difference ($S_{\text{BET}} - S_{\text{CTAB}}$) is greater than 25 m^2/g , optionally greater than 35 m^2/g .

48- (New) The process according to claim 47, wherein the non-pretreated silica used in step a) has a BET specific surface ranging from 110 to 300 m^2/g , optionally from 150 to 250 m^2/g , and a CTAB specific surface ranging from 70 to 230 m^2/g , optionally from 110 to 190 m^2/g .

49- (New) The process according to claim 48, wherein the non-pretreated silica used in step a) has a sulfur content lower than 0.1 % by weight.

50- (New) The process according to claim 38, wherein in step a) the non-pretreated silica is pretreated by at least one organosilane hydrophobing compound of the formula:



wherein:

R, identical or different, is an alkyl and/or alkenyl radical,

X, identical or different, is an halogen radical or an alkoxy radical or a silanolate radical, and

n is equal to 1, 2 or 3.

51- (New) The process according to claim 50, wherein:

R, identical or different, is a vinyl radical and/or an alkyl radical, optionally methyl, ethyl or propyl; and

X, identical or different, is an halogen radical, optionally Cl or a silanolate radical.

52- (New) The process according to claim 50, wherein the pretreated silica obtained in step a) has an organic graft number by nm² of silica :

greater than 7 if n=1

greater than 3 if n=2 or

greater than 2 if n=3.

53- (New) The process according to claim 50, wherein in step a), the organosilane hydrophobing compound is dimethyldichlorosilane, a mixture of

dimethyldichlorosilane and methylvinylchlorosilane, or a potassium methylsiliconate.

54- (New) The process according to claim 50, wherein step a) further comprises the addition of the organosilane hydrophobing compound to an aqueous suspension or slurry of the precipitated silica under neutral or, optionally, basic pH conditions.

55- (New) The process according to claim 54, wherein step a) further comprises the dry impregnation of the precipitated silica, under solid form, optionally at a temperature ranging from 15 to 100 °C, by the hydrophobing silicone oil, the hydrophobing silicone oil being not under aqueous emulsion form.

56- (New) The process according to claim 38, wherein the silicone elastomer is at least one organopolysiloxane represented by the average composition formula $R^1_pSiO_{(4-p)/2}$ in which R^1 , identical or different, represents an unsubstituted or substituted monovalent hydrocarbon group, optionally of 1 to 10 carbon atoms, and p is a number ranging from 1.90 to 2.05, and wherein at least 80 mol%, optionally at least 95 mol%, of the R^1 groups are methyl groups.

57- (New) The process according to claim 56, wherein the ratio of incorporation of alkenyl groups within the total amount of R^1 groups is from 0.01 to 20 mol%, optionally from 0.025 to 5 mol%.

58- (New) The process according to claim 57, wherein the silicone elastomer has less than 1 % by weight of organopolysiloxane having a polymerisation degree of 20 or less with terminal hydroxy or alkoxy groups.

59- (New) The process according to claim 58, wherein, in step b) the pretreated silica obtained in step a) is incorporated in the silicone elastomer by mixing at room temperature, optionally without addition of any process aid / plasticizer.

60- (New) The process according to claim 59, wherein the silicone elastomer / reinforcing filler mixing time in step b) is between 0.2 and 5 hours, optionally between 0.2 and 2.5 hours.

61- (New) The process according to claim 59, wherein in step b) the silicone elastomer mixed with the pretreated silica obtained in step a) has an initial plasticity ranging from 200 to 300.

62- (New) The process according to claim 61, wherein the rise of the initial plasticity after 24 hours of the silicone elastomer mixed with the pretreated silica is lower than 110, optionally lower than 90.